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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,641	09/26/2003	Robert J. Drost	SUN-P9609	7883
22835	7590	11/03/2004	EXAMINER	
PARK, VAUGHAN & FLEMING LLP 508 SECOND STREET SUITE 201 DAVIS, CA 95616			WELLS, KENNETH B	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,641

Applicant(s)

DROST ET AL.

Examiner

Kenneth B. Wells

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The disclosure is objected to because of the following informalities: on page 4, line 5, "compare" should be changed to "compares" for proper grammatical form.

Appropriate correction is required.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, changing the frequency (speed) of the local chip by changing the power supply voltage must be shown or the feature canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of

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the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. Claims 2, 3, 8, 10, 16, 18 and 24 are objected to because of the following informalities: in claims 2, 10 and 18, "frequency" should be changed to --speed-- on line 1 of each for clear antecedent basis. In claim 3, line 1, "of" should be deleted because it is grammatically improper. In claims 8, 16 and 24, each occurrence of the word "node" should apparently be changed to --chip--. Appropriate correction is required.

4. Claims 2, 10 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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The specification and drawings do not describe in any detail how the frequency of the local chip is adjusted by changing the power supply voltage of the local chip. As shown in instant Fig. 1, the frequency of the local chip is only changed via the control signal from the frequency detector which is applied to each of the inverters (not by changing the power supply voltage of the chip).

5. Claims 2, 10 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims are indefinite because they are misdescriptive, i.e., the frequency of the local chip is adjusted using the control signal from the frequency detector and applying to control inputs of the inverters in instant Fig. 1, not by changing the power supply voltage of the chip.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 9, 11 and 12 are rejected under 35

U.S.C. 102(b) as being anticipated by Li et al.

Note Fig. 1 of Li et al, where the recited external frequency reads on clock signal CLKREF (supplied from off the chip, as described on lines 21+ of column 1); the recited internal frequency reads on the output clock from divider circuit 20; the recited internal oscillator reads on VCO 18; and the recited control signal reads on either of the two outputs from circuit 12. The function recited in claims 4 and 12 is considered to be inherent in the operation of circuit 12, and the coupling of the local chip (which reads on the Fig. 1 circuit of Li et al) and the unillustrated neighboring chip is a direct connection (claims 3 and 11).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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Claims 5, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al in view of Coleman et al.

The claimed details of the phase detector and integrator circuitry, though not disclosed by Li et al, nevertheless would have been obvious to those having ordinary skill in the art in view of Coleman et al which teaches this circuitry in Fig. 2. The conversion and comparing steps of claims 5, 13 and 21 are inherent in Li et al's Fig. 1, while the recited capacitor reads on element 30 of Coleman et al, the recited offset current source reads on circuitry 32 of Coleman et al, and the recited Amplifier reads on buffer 48 of Coleman et al (a buffer is a type of unity gain amplifier, similar to applicant's voltage follower 207). The motivation for using the Coleman et al phase detector in Li et al's Fig. 1 circuitry is to obtain the advantages taught by Coleman et al at column 1, lines 65-68, i.e., a simple and inexpensive phase detector circuit with high S/N ratio.

8. Claims 6-8, 14-16, 17, 19, 20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al.

The control signal filtering of claims 6, 7, 14 and 15, though not disclosed by Li et al, nevertheless would have been obvious to those having ordinary skill in the art because such

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is old and well-known in the art and (used for removing noise components from signals).

The fractional relationship between the internal and external frequency signals recited in claims 8 and 16 also would have been obvious because feedback signals in synchronizing loops are typically divided down by a frequency divider prior to being compared with the reference signal (see, for example, divider 20 in Li et al's Fig. 1). Using a PLL or DLL with such a divider to generate the signal CLKREF would have been obvious because this would provide a stable frequency signal from the unillustrated neighboring chip.

As to claims 17, 19, 20 and 22-24, these claims recite the same limitations as noted above, except in a computer system. Because one of ordinary skill in the art will easily recognize that the synchronizing circuit of Li et al's Fig. 1 is for use in any environment, especially a computer system, these claims also do not define patentably over Li et al (the motivation for using Li et al's Fig. 1 circuitry in a computer system is simply to obtain the benefits taught by Li et al in column 1, lines 10-65).

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

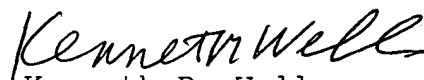
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Note Fig. 22 and claims 7, 8 of Nakanishi; Fig. 2 and the description thereof in Kurd et al; Fig. 1 of Hwang et al; and Fig. 3 of Jefferson.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is (571)272-1757. The examiner can normally be reached on Monday through Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at (571)272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth B. Wells
Primary Examiner
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November 1, 2004